

# Practice 4-8

## Comparing and Ordering Fractions

Compare each pair of numbers using  $<$ ,  $=$ , or  $>$ .

- |   |  |  |
|---|--|--|
| 1. $2\frac{14}{17}$ <input type="checkbox"/> $1\frac{16}{17}$ | 2. $\frac{15}{21}$ <input type="checkbox"/> $\frac{5}{7}$      | 3. $2\frac{7}{8}$ <input type="checkbox"/> $2\frac{5}{6}$      |
| 4. $3\frac{15}{16}$ <input type="checkbox"/> $3\frac{21}{32}$ | 5. $4\frac{7}{8}$ <input type="checkbox"/> $3\frac{9}{10}$     | 6. $5\frac{9}{10}$ <input type="checkbox"/> $5\frac{18}{20}$   |
| 7. $1\frac{19}{20}$ <input type="checkbox"/> $2\frac{1}{20}$  | 8. $4\frac{5}{6}$ <input type="checkbox"/> $5\frac{19}{20}$    | 9. $7\frac{3}{10}$ <input type="checkbox"/> $7\frac{9}{30}$    |
| 10. $4\frac{19}{24}$ <input type="checkbox"/> $4\frac{7}{12}$ | 11. $5\frac{19}{20}$ <input type="checkbox"/> $6\frac{21}{22}$ | 12. $4\frac{15}{20}$ <input type="checkbox"/> $4\frac{21}{28}$ |

Order each set of numbers from least to greatest.

- |  |  |   |
|--|--|---|
| 13. $\frac{9}{10}, \frac{5}{6}, \frac{14}{15}$ | 14. $\frac{7}{8}, 1\frac{7}{12}, 1\frac{5}{6}$                   | 15. $\frac{14}{15}, \frac{9}{10}, \frac{11}{12}$              |
| _____  | _____  | _____   |
| 16. $2\frac{1}{4}, 3\frac{7}{8}, 3\frac{5}{6}$ | 17. $\frac{2}{3}, \frac{4}{5}, \frac{7}{30}, \frac{11}{15}$      | 18. $2\frac{1}{6}, 1\frac{3}{4}, 3\frac{7}{8}, 2\frac{1}{10}$ |
| _____  | _____  | _____   |
| 19. $\frac{5}{12}, \frac{17}{30}, \frac{3}{5}$ | 20. $1\frac{5}{6}, 2\frac{1}{6}, 1\frac{11}{12}, 1\frac{11}{18}$ | 21. $\frac{17}{20}, 1\frac{18}{25}, 2\frac{31}{36}$           |
| _____  | _____  | _____   |

Use mental math to compare each pair of fractions using  $<$ ,  $=$ , or  $>$ .

- |  |  |   |
|--|--|---|
| 22. $\frac{1}{6}$ <input type="checkbox"/> $\frac{1}{8}$   | 23. $\frac{8}{9}$ <input type="checkbox"/> $\frac{8}{12}$  | 24. $\frac{1}{4}$ <input type="checkbox"/> $\frac{1}{5}$    |
| 25. $\frac{3}{9}$ <input type="checkbox"/> $\frac{3}{7}$   | 26. $\frac{5}{50}$ <input type="checkbox"/> $\frac{1}{60}$ | 27. $\frac{9}{10}$ <input type="checkbox"/> $\frac{10}{12}$ |
| 28. $\frac{1}{12}$ <input type="checkbox"/> $\frac{1}{15}$ | 29. $\frac{5}{6}$ <input type="checkbox"/> $\frac{3}{4}$   | 30. $\frac{1}{65}$ <input type="checkbox"/> $\frac{3}{60}$  |

31. Four puppies measured  $5\frac{1}{4}$  in.,  $5\frac{3}{8}$  in.,  $5\frac{5}{8}$  in., and  $5\frac{5}{16}$  in. long at birth. Put the lengths in order from least to greatest.
- \_\_\_\_\_

# Reteaching 4-7

## Least Common Multiple

Find the *least common multiple (LCM)* of 8 and 12.

① Begin listing multiples of each number.

8: 8, 16, 24, 32, 40

12: 12, 24

② Continue the lists until you find the first multiple that is common to both lists. That is the LCM.

The least common multiple of 8 and 12 is 24.

List multiples to find the LCM of each pair of numbers.

1. 4: \_\_\_\_\_

5: \_\_\_\_\_

LCM: \_\_\_\_\_

3. 9: \_\_\_\_\_

15: \_\_\_\_\_

LCM: \_\_\_\_\_

5. 8: \_\_\_\_\_

24: \_\_\_\_\_

LCM: \_\_\_\_\_

7. 4: \_\_\_\_\_

7: \_\_\_\_\_

LCM: \_\_\_\_\_

2. 6: \_\_\_\_\_

7: \_\_\_\_\_

LCM: \_\_\_\_\_

4. 10: \_\_\_\_\_

25: \_\_\_\_\_

LCM: \_\_\_\_\_

6. 8: \_\_\_\_\_

12: \_\_\_\_\_

LCM: \_\_\_\_\_

8. 15: \_\_\_\_\_

25: \_\_\_\_\_

LCM: \_\_\_\_\_

Use prime factorization to find the LCM of each set of numbers.

9. 9, 21 \_\_\_\_\_

10. 6, 8 \_\_\_\_\_

11. 18, 24 \_\_\_\_\_

12. 40, 50 \_\_\_\_\_

# Reteaching 4-3

## Prime Numbers and Prime Factorization

A *prime number* has exactly two factors, the number itself and 1.

$$5 \times 1 = 5$$

5 is a prime number.

A *composite number* has more than two factors.

$$1 \times 6 = 6$$

$$2 \times 3 = 6$$

1, 2, 3, and 6 are factors of 6.

6 is a composite number.

The number 1 is neither prime nor composite.

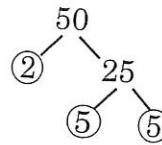
Every composite number can be written as a product of prime numbers.

$$6 = 2 \times 3$$

$$8 = 2 \times 2 \times 2$$

$$12 = 2 \times 2 \times 3$$

Factors that are prime numbers are called *prime factors*. You can use a *factor tree* to find prime factors. This one shows the prime factors of 50.



$50 = 2 \times 5 \times 5$  is the *prime factorization* of 50.

Tell whether each number is prime or composite. Explain.

1. 21

\_\_\_\_\_

2. 43

\_\_\_\_\_

3. 53

\_\_\_\_\_

4. 74

\_\_\_\_\_

5. 54

\_\_\_\_\_

6. 101

\_\_\_\_\_

7. 67

\_\_\_\_\_

8. 138

\_\_\_\_\_

9. 83

\_\_\_\_\_

10. 95

\_\_\_\_\_

11. 41

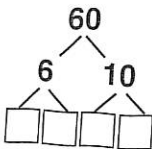
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12. 57

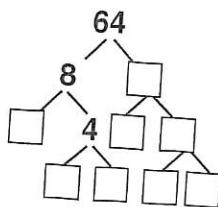
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Complete each factor tree.

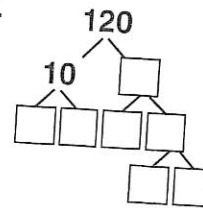
13.



14.



15.



Find the prime factorization of each number.

16. 21

\_\_\_\_\_

17. 48

\_\_\_\_\_

18. 81

\_\_\_\_\_

19. 63

\_\_\_\_\_

20. 100

\_\_\_\_\_

21. 103

\_\_\_\_\_

# Practice 4-3

## Prime Numbers and Prime Factorization

1. Make a list of all the prime numbers from 50 through 75 \_\_\_\_\_

Tell whether each number is prime or composite.

2. 53

3. 86

4. 95

5. 17

6. 24

7. 27

8. 31

9. 51

10. 103

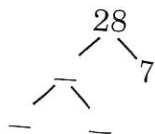
11. 47

12. 93

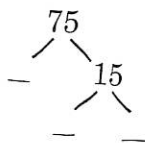
13. 56

Complete each factor tree.

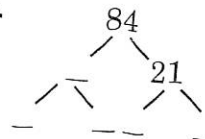
14.



15.



16.



Find the prime factorization of each number.

17. 58

18. 72

19. 40

20. 30

21. 144

22. 310

Find the number with the given prime factorization.

23.  $2 \times 2 \times 5 \times 7 \times 11$

24.  $2 \times 3 \times 5 \times 7 \times 11$

25.  $2 \times 2 \times 13 \times 17$

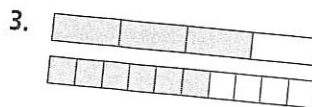
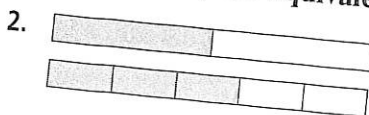
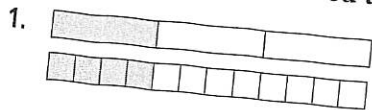
26.  $7 \times 11 \times 13 \times 17$

27. There are 32 students in a class. How many ways can the class be divided into groups with equal numbers of students? What are they?

# Practice 4-5

## Equivalent Fractions

Name the fractions modeled and determine if they are equivalent.



By what number can you multiply the numerator and denominator of the first fraction to get the second fraction?

4.  $\frac{2}{3}, \frac{4}{6}$

5.  $\frac{3}{8}, \frac{15}{40}$

6.  $\frac{7}{10}, \frac{42}{60}$

By what number can you divide the numerator and denominator of the first fraction to get the second fraction?

7.  $\frac{6}{8}, \frac{3}{4}$

8.  $\frac{70}{80}, \frac{7}{8}$

9.  $\frac{15}{60}, \frac{1}{4}$

Write two equivalent fractions for each fraction.

10.  $\frac{3}{10}$  \_\_\_\_\_

11.  $\frac{7}{8}$  \_\_\_\_\_

12.  $\frac{5}{6}$  \_\_\_\_\_

13.  $\frac{15}{20}$  \_\_\_\_\_

14.  $\frac{8}{12}$  \_\_\_\_\_

15.  $\frac{15}{45}$  \_\_\_\_\_

State whether each fraction is in simplest form. If it is not, write it in simplest form.

16.  $\frac{15}{35}$  \_\_\_\_\_

17.  $\frac{22}{55}$  \_\_\_\_\_

18.  $\frac{34}{36}$  \_\_\_\_\_

19.  $\frac{19}{57}$  \_\_\_\_\_

20.  $\frac{27}{54}$  \_\_\_\_\_

21.  $\frac{30}{41}$  \_\_\_\_\_

Solve.

22. A library has 10 camping guide books, 4 fishing guide books, and 6 hiking guide books. In simplest form, what fraction of the guide books are camping or hiking guide books?

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0  
100

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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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## Prime Factors (G)

Use a tree diagram to find the prime factors of each number.

122

28

75

57

28

123

94

104

88

## Adding 4-Digit Numbers (A)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Calculate each sum.

$$\begin{array}{r} 9151 \\ + 7977 \\ \hline \end{array}$$

$$\begin{array}{r} 2982 \\ + 5556 \\ \hline \end{array}$$

$$\begin{array}{r} 1466 \\ + 4639 \\ \hline \end{array}$$

$$\begin{array}{r} 9459 \\ + 6733 \\ \hline \end{array}$$

$$\begin{array}{r} 4681 \\ + 1344 \\ \hline \end{array}$$

$$\begin{array}{r} 7101 \\ + 4284 \\ \hline \end{array}$$

$$\begin{array}{r} 4585 \\ + 5305 \\ \hline \end{array}$$

$$\begin{array}{r} 6579 \\ + 1463 \\ \hline \end{array}$$

$$\begin{array}{r} 6739 \\ + 6622 \\ \hline \end{array}$$

$$\begin{array}{r} 2721 \\ + 4245 \\ \hline \end{array}$$

$$\begin{array}{r} 1197 \\ + 1116 \\ \hline \end{array}$$

$$\begin{array}{r} 6418 \\ + 6187 \\ \hline \end{array}$$

$$\begin{array}{r} 4685 \\ + 6230 \\ \hline \end{array}$$

$$\begin{array}{r} 9043 \\ + 7332 \\ \hline \end{array}$$

$$\begin{array}{r} 1845 \\ + 4701 \\ \hline \end{array}$$

# Complements of 100 and 1000 (A)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Subtract to determine each complement.

$$\begin{array}{r} 100 \\ - 71 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 464 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 825 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 566 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ - 98 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 831 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 463 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 859 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ - 13 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 374 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 141 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ - 31 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ - 91 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ - 34 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ - 11 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 889 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ - 17 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 332 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 603 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 157 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ - 47 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 393 \\ \hline \end{array}$$

$$\begin{array}{r} 100 \\ - 93 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 529 \\ \hline \end{array}$$

$$\begin{array}{r} 1000 \\ - 171 \\ \hline \end{array}$$





# Long Division with a Grid (H)

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Calculate each quotient.

1	2	)	4	3	2
			-		
				-	

8	2	)	3	2	8
			-		

5	8	)	6	9	6
			-		
				-	

4	7	)	7	5	2
			-		
				-	

2	2	)	7	9	2
			-		
				-	

2	7	)	3	2	4
			-		
				-	

1	5	)	4	6	5
			-		
				-	

2	3	)	7	5	9
			-		
				-	

4	1	)	6	5	6
			-		
				-	

## Skills Worksheet

**Directed Reading B****Section: Compounds**

**Circle the letter of the best answer for each question.**

1. Which of the following substances is a compound?
  - a. oxygen
  - b. salt
  - c. magnesium
  - d. copper

**COMPOUNDS: MADE OF ELEMENTS**

2. What kind of substance is composed of two or more elements that are chemically combined?
  - a. element
  - b. compound
  - c. mixture
  - d. particle
3. How do the properties of a compound compare with the properties of the elements that form it?
  - a. always the same
  - b. always different
  - c. sometimes the same
  - d. sometimes different

**The Ratio of Elements in a Compound**

4. How do elements join to form compounds?
  - a. never in the same ratio
  - b. in a specific mass ratio
  - c. randomly
  - d. in a 1:8 mass ratio

**Directed Reading B** *continued*

**PROPERTIES OF COMPOUNDS**

**Circle the letter of the best answer for each question.**

5. Which of the following statements about compounds is true?
- a. All compounds react with acid.
  - b. Each compound has its own physical properties.
  - c. Compounds are used to identify elements.
  - d. Compounds are similar to elements.

**Properties: Compounds Versus Elements**

6. Why are we able to eat sodium and chlorine in a compound?
- a. Sodium reacts violently with calcium.
  - b. Chlorine is table salt.
  - c. The compound is harmless.
  - d. Sodium is a metal.

**BREAKING DOWN COMPOUNDS**

Read the words in the box. Read the sentences. Fill in each blank with the word or phrase that best completes the sentence.

carbonic acid      chemical change      carbon dioxide

7. The compound that helps give some drinks "fizz" is called \_\_\_\_\_.
8. When you open a soft drink, carbonic acid breaks down into \_\_\_\_\_ and water.
9. The only way to break down compounds is through a \_\_\_\_\_.

**Directed Reading B** *continued*

**COMPOUNDS IN YOUR WORLD**

**Compounds in Industry**

**Circle the letter of the best answer for each question.**

**10.** Which of the following compounds is broken down to make aluminum?

- a. mercury oxide
- b. aluminum oxide
- c. aluminum chloride
- d. magnesium oxide

**Compounds in Nature**

**11.** Which of the following can form compounds from nitrogen in the air?

- a. bacteria
- b. pea plants
- c. animals
- d. all plants

**12.** What type of compound do plants and animals use to make proteins?

- a. sugar
- b. ammonia
- c. carbon dioxide
- d. nitrogen compounds

**13.** What do plants use during photosynthesis to make carbohydrates?

- a. soil
- b. carbon dioxide
- c. carbon monoxide
- d. oxygen

Skills Worksheet

# Directed Reading B

## Section: Mixtures

### PROPERTIES OF MIXTURES

Read the words in the box. Read the sentences. Fill in each blank with the word or phrase that best completes the sentence.

mixture

compound

physical

identity

1. A combination of substances that are not chemically combined is called a(n) \_\_\_\_\_.
2. Two or more materials that combine chemically form a(n) \_\_\_\_\_.
3. In a mixture, the \_\_\_\_\_ of the substances doesn't change.
4. Mixtures are separated through \_\_\_\_\_ changes.

Read the description. Then, draw a line from the dot next to each description to the matching word.

- |  |   |                 |
|--|---|-----------------|
| 5. used to separate crude oil                      | ● | a. distillation |
| 6. used to separate a mixture of aluminum and iron | ● | b. centrifuge   |
| 7. used to separate the parts of blood             | ● | c. filter       |
| 8. used to separate sulfur and salt                | ● | d. magnet       |

**Directed Reading B** *continued***The Ratio of Components in a Mixture**

**Circle the letter of the best answer for each question.**

9. Which of the following affects the color of granite?

- a. ratio of minerals
- b. amount of mixture
- c. temperatures of mixture
- d. weight of minerals

**SOLUTIONS**

10. Which of the following is NOT true of solutions?

- a. They contain a solute.
- b. They contain evenly mixed substances.
- c. They contain a solvent.
- d. They look like two substances.

11. When a substance spreads evenly through a mixture, what is the process called?

- a. solute
- b. dissolving
- c. chemical change
- d. solubility

12. What do you call the substance that is dissolved in a solution?

- a. solute
- b. solvent
- c. compound
- d. mixture